

AFFIDAVIT OF BERT SMITH

STATE OF OKLAHOMA)
) ss:
COUNTY OF CLEVELAND)

I, Bert Smith, being of lawful age and having first been duly sworn, state as follows:

1. That I presently work as a Senior Project Manager for The Benham Companies, LLC Infrastructures and Environment, based out of our Norman, Oklahoma office.

2. That I have over twenty-five (25) years experience as an environmental professional;

3. That I have performed well over one thousand (1,000) environmental projects, the majority of which have involved evaluating, assessing and providing remedial solutions for impacted soil, surface water and groundwater;

4. That I have been retained to review, comment on and provide expert opinions regarding subpoenas issued on April 13, 2006 in Case No. 4:05-CV-00329-TCK-SAJ in the Northern District of Oklahoma;

The Scope of Work is Overly Broad and Vague

5. The Scope-Of-Work provided in the subpoenas is woefully inadequate and does not provide even the most basic information needed to fully evaluate the technical basis, criteria, or merits of the Work being proposed by the State of Oklahoma. If a private firm submitted this Scope-of-Work to any State of Oklahoma regulatory agency, such as the Oklahoma Department of Environmental Quality, it would be rejected outright by the Agency as lacking detail, specificity, and scientific basis. In the event that the State of Oklahoma provides a Work Plan describing in detail the sampling program being proposed,

the scientific basis for this program, and the overall intent of the proposed sampling, more specific opinions can be provided. A Work Plan should be prepared by the State of Oklahoma and then be made available to technical experts retained by the poultry growers for their peer review and comment. This peer review process on a technical Work Plan is almost always conducted and often times identifies problems or inadequacies in the proposed sampling program or protocols, which can prevent problems such as cross-contamination of environmental samples or groundwater, or identify problems associated with the analytical testing methods or parameters being proposed. Without a detailed and standard Work Plan, the Poultry Growers are being denied technical input into this process, which could have potentially damaging consequences to their land, groundwater, or operations.

6. The Scope of Work is also deficient with regard to the necessity of obtaining data in the context of the site under review. To understand the runoff water chemical quality data, the groundwater chemical data, or the soil chemistry data, the history of the application of the litter to specific fields must be fully evaluated and understood, as well as the past historical use of these fields prior to litter application (i.e. were they used to grow crops and were fertilizers/pesticides/herbicides applied; or were the fields historically used for cattle grazing). Specifically, to understand the data derived from the sampling programs proposed by the State of Oklahoma, the amount of litter application, frequency of litter application, litter application methods, at what time during the year the litter was applied, time frame since the last application, prior land use of the field, etc. must be known. The State of Oklahoma has made no attempt to understand the litter application history for the various fields where sampling is being proposed, or their prior use history. Because of this, data derived from the State's sampling programs related to groundwater, soil, and runoff water

will be potentially flawed, unreliable, and unusable because the history of the litter application (and prior historical use) must be a necessary and required part of the evaluation of the data for obvious reasons.

The Soil Sampling Information is Meaningless

7. The soil sampling from waste applied fields sampling program is very poorly conceived and poorly thought out, and lacks technical detail or specificity. The soil sampling program proposed by the State of Oklahoma will not provide technically sound data on which technically sound or informed decisions can be made concerning waste constituent levels in soil, or the migration and fate of those constituents in the soil profile.

8. The soil sampling program does not consider or recognize that there are often several different soil types, each with potentially different physical and chemical properties, present on any given waste-applied field. The soil sampling program should recognize and consider the different soil types present over a given waste-applied field, since these different soil types can provide differences in the chemical properties of the soil sampled, which can profoundly affect the migration and fate of waste constituents in the soil. Without consideration given to what soil types the soil samples are collected from, and without consideration given to the likelihood of differences in chemical/physical properties of these soils, the data collected by the State of Oklahoma will be potentially unreliable, meaningless, and flawed.

9. The State of Oklahoma has not proposed to conduct any baseline or background sampling of fields where no wastes have been applied; or from fields where standard agricultural crops are grown, with the associated use and applications of herbicides, pesticides, and fertilizers on these farm lands. Without a background soil sampling database

derived from each soil type, there are no baseline or background levels where the chemical constituent data from the waste-applied fields can be compared and contrasted. The lack of a background or baseline sampling program make any data collected by the State of Oklahoma potentially unreliable, meaningless, and flawed.

The Edge-of-Field Rainfall Runoff Sampling Information is Meaningless

10. The rainfall runoff sampling program is very poorly conceived and poorly thought out, and lacks technical detail or specificity. The rainfall runoff sampling program proposed by the State of Oklahoma will not provide technically sound data on which technically sound or informed decisions can be made concerning runoff characteristics, constituent levels, or constituent mass loading in water runoff from the litter-applied fields.

11. In any surface water sampling program where impact to a surface water stream/river/pond/lake is being alleged to result from runoff from a source area, the main criteria is to first have evidence of a measurable contaminant impact to the surface water in the stream/river/pond/lake of interest. Once a contaminant impact is identified in a stream/river/pond/lake, the process to define the source of that impact is well documented in the technical literature and is straight-forward, technically sound, and proceeds in a step-by-step process. First, the contributing watershed areas are defined and potential contaminant source areas are identified within the watersheds. A detailed surface-water sampling Work Plan would then be prepared, reviewed, and implemented to ensure sound scientific principals are employed in the study. The surface-water sampling program to identify potential watershed source area(s) contributing impact to the surface-water body proceeds in a step-by-step fashion and typically proceeds from the water body where the impact has been identified in an upstream direction within the watershed. For example, in the case of a

contaminated river segment, a surface-water sampling program should be defined that moves upstream from the impacted river segment where each primary tributary contributing water to that contaminated river segment is sampled to determine if a specific tributary(s) contains impacted water that can be identified as causing a measurable impact to the contaminated river segment. If so, then sampling of surface water will proceed upstream in this tributary(s) until the source of the contaminated water that is contained within the tributary(s) is identified. In order to properly document the source of the surface water impact, sampling other smaller or secondary tributaries within the primary tributary system is often necessary. This upstream sampling process continues until a potential source area is identified or confirmed.

12. The Rainfall Runoff Sampling Plan proposed by the State of Oklahoma does not follow this well documented sampling protocol, but instead makes the assumption that the litter-applied fields are the source of the impact to area streams or rivers, without any scientific weight being given to evaluating other possible source areas. The type of Rainfall Runoff Sampling Program outlined by the State of Oklahoma is severely flawed and will likely result in erroneous, unreliable, or flawed results.

13. The Rainfall Runoff Sampling Plan proposed by the State of Oklahoma indicated that *"where runoff water accumulates in a natural depression, the water may be sampled directly from these locations."* In order to properly determine if a litter-applied field is causing a measurable impact to a stream or river, the runoff from the field first and foremost must find its way to the stream or river, and discharge into those water bodies for an impact to first occur. Additionally, runoff of impacted surface water must be of a sufficient volume for a measurable impact to occur to the receiving stream or river. The sampling

program proposed by the State of Oklahoma ignores these very basic premises. The State of Oklahoma proposes to sample surface water runoff that ponds in depressions or low areas adjacent to the litter-applied fields, or direct runoff on sloping land at the edge of the fields, and completely ignores the fact or possibility that this water will never reach the stream or river segment in question, and thereby never cause a measurable impact to the stream or river.

14. Also of much importance is the fact that these litter-applied fields are sometimes located hundreds or thousands of feet from a receiving stream or river. The chemical characteristics of surface water runoff measured in a depression next to a field where litter has been applied is very likely to be completely different in composition and concentration to the surface water that could discharge into the receiving stream or river located several hundreds to thousands of feet away. The sampling program proposed by the State of Oklahoma will result in flawed analyses of the data since it will not be representative of what constituents, or levels of constituents, that might actually flow into a receiving stream or river. In addition, it will not be representative of the volume of runoff water that might reach a receiving stream or river, since the State of Oklahoma is not taking flow measurements of runoff water. The sampling should instead be done at the stream segment point where the watershed drainage that encompass the fields where litter is applied discharges (just upstream) into the stream or river segment in question, and should include a stream flow measurement to determine the volume of runoff water reaching a stream or river. The Rainfall Runoff Sampling Program as defined by the State of Oklahoma will result in flawed, unreliable, and mostly unusable data.

15. Another significant major flaw of the State of Oklahoma rainfall runoff sampling program is that it does not provide any type of baseline or background information to which the data collected can be compared. For example, sampling programs of this type will typically find control or background areas where the soil type, vegetative cover, and runoff characteristics are similar, and sample runoff from these areas to determine possible background concentrations of constituents that might occur naturally, or potentially be affected by standard farming practices including the possible standard use of fertilizers, pesticides, and herbicides. The State of Oklahoma's program lacks this very basic technical criteria, and makes interpretation of data potentially flawed, meaningless, and unreliable.

The Proposed Monitoring Wells are Unlawful and Unreliable

16. The Agency with primary jurisdiction over monitoring wells is the Oklahoma Water Resources Board (OWRB). The OWRB regulation number 785:35-7-2 sets forth minimum standards for the drilling and construction of monitoring wells and geotechnical borings. Strict interpretation of OWRB regulation number 785:35-7-3 indicates that a variance is required for the type of monitoring well being proposed by the State of Oklahoma in its subpoenas. Installation of the small diameter monitoring wells as proposed by the State of Oklahoma is unlawful without a variance being issued.

17. Monitoring wells from which groundwater samples will be collected as proposed by the State of Oklahoma would not provide reliable data due to: 1) the lack of proper protection against cross-contamination between the surface and subsurface; 2) the fact that proper and standard sampling methods typically cannot be employed to collect groundwater samples; and 3) such wells do not provide proper vehicles for obtaining competent water samples. Groundwater quality data derived from small diameter soil boring

monitor wells has been typically viewed by the State of Oklahoma as providing data considered to be suitable for screening purposes only due to the fact that the type of monitor wells proposed by the State of Oklahoma can provide unreliable groundwater quality data.

18. The Scope of Work proposed by the State of Oklahoma does not provide for a determination of baseline and background surface or groundwater quality. In the absence of background comparisons, any information obtained from the monitoring wells proposed by the State of Oklahoma is meaningless, potentially flawed, and unreliable.

FURTHER, AFFIANT STATES NOT.

Bert Smith
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Subscribed and sworn to before me this 1st day of May, 2006.

Diane Hamilton
Notary Public

My Commission Expires:

Nov. 8, 2007
[SEAL]

My Commission Number

99018237



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